Rhode Island Department of Environmental Management

Fact Sheet

Office of Technical and Customer Assistance

January, 2003

Rhode Island Universal Waste Rule

Universal wastes are generated by the commercial/industrial sector and other non-household entities such as universities, hospitals, state and local agencies, businesses in home settings, and household hazardous waste collection centers. In the past, regulated entities have been required to handle universal wastes as hazardous wastes. The Universal Waste Rule eases the regulatory burden on entities that generate these wastes by streamlining the administrative requirements. For example, the rule extends the amount of time that entities can accumulate universal wastes on-site by up to a year or more, as explained below. It also allows entities to transport such wastes with a common carrier, instead of a hazardous waste transporter, and no longer requires entities to prepare a manifest.

What are Universal Wastes?

Please Note: A waste of any of the six types listed below that has at least one hazardous waste characteristic, per 40 CFR 261 Subpart C, must be managed as a universal waste if it is not managed as a hazardous waste.

- *Batteries* - Any battery which is considered a hazardous waste must be managed as a universal waste. This includes discarded primary (non-rechargeable) and secondary (rechargeable) batteries that contain elements such as cadmium, lead, or mercury, which would render them federally or state-hazardous. Examples are nickel-cadmium (Ni-Cad), sealed lead-acid, mercury-oxide (button cell), or older alkaline (manufactured prior to 1993) batteries. However, waste lead-acid batteries (such as automotive batteries) not managed, or eligible for management, under 40 CFR 266, Subpart G, are subject to the Universal Waste Rule requirements. Lead-acid batteries that are stored at facilities that reclaim them are subject to federal and state regulations.

  Many commonly generated waste batteries, such as dry cell zinc-carbon, silver oxide, and post-1993 alkaline (long-life) batteries, typically do not contain appreciable amounts of the hazardous elements of concern, and hence would not be required to be managed as universal waste. Consumer products such as those that contain difficult-to-remove rechargeable batteries may also be managed along with universal waste batteries. In the interest of diverting these items from less desirable disposal destinies such as incineration or disposal in solid waste landfills, the state encourages the disposal of all batteries as universal waste.

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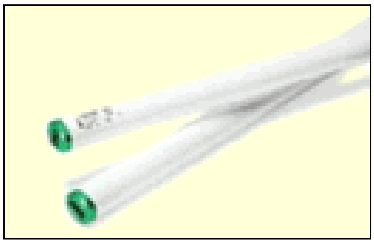
- Pesticides that have been recalled or banned from use, are obsolete, have become damaged, or are no longer needed (due to changes in cropping patterns or other factors) are considered universal wastes. These have often been stored for long periods of time in sheds or barns.

- Thermostats, which can contain as much as three grams of liquid mercury and are found in homes and commercial, industrial, and community buildings must be managed as universal waste.

- Cathode Ray Tubes commonly known as "picture tubes" in televisions, computer monitors, oscilloscopes, and radar-receiving equipment are universal wastes. The tube itself and the entire display device containing the cathode ray tubes, are universal waste.

- Mercury-Containing Devices include any electrical product or component which contains elemental mercury that is necessary for its operation and is housed within an outer metal, glass, or plastic casing. These devices include, but are not limited to, thermometers, barometers, electric switches, electric relays, thermocouples, manometers, and sphygmomanometers.

- Mercury-Containing Lamps are lamps in which mercury is purposely introduced by the manufacturer for the operation of the lamp. They include, but are not limited to, fluorescent lamps, neon lamps, high intensity discharge (HID) lamps (including mercury vapor, metal halide and high pressure sodium lamps).



Small vs. Large Quantity Handlers of Hazardous Waste:

These thresholds apply to g*enerators* and all other *handlers* of universal waste.

Small Ouantitv Handler: 40 CFR 273 Subpart B

A handler who accumulates less than 20,000 kilograms (44,000 lbs.) of cathode ray tubes or their display devices, calculated collectively at any time, ***and*** who accumulates less than 5000 kilograms (11,000 lbs.) of all other universal wastes calculated collectively at any time. A small quantity handler of universal waste is not required to notify DEM and EPA of its universal waste handling activities. A small quantity handler of universal waste is not required to keep records of shipments of universal waste.

Large Quantity Handler:
40 CFR 273 Subpart C

A handler who accumulates 20,000 kilograms (44,000 lbs.) or more of cathode ray tubes or their display devices, calculated collectively at any time, ***or*** who accumulates 5000 kilograms (11,000 lbs.) or more of all other universal wastes calculated collectively at any time. A large quantity handler of universal waste must submit written notification of universal waste management to DEM and obtain an EPA identification number prior to accumulating these amounts. Note that if the entity already has an EPA identification number, this notification is not required. A large quantity handler must also keep a record of each shipment of universal waste *to and from* the facility (Recordkeeping details are specified in 40 CFR 273.39). A log, invoice manifest, bill of lading, or other shipping document is acceptable. These records must be kept for three years.

Both small and large quantity handlers of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated or received from others. But, handlers may accumulate universal waste for longer periods of time, provided that such storage is solely for the purpose of accumulation to facilitate proper recovery, treatment or disposal, and the handler can prove this purpose. If the handler accumulates waste, he must demonstrate accumulation time by:

- Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;
- Marking or labeling the individual item of universal waste (e.g., each battery or thermostat) with the date it became a waste or was received;
- Maintaining an inventory system on-site that identifies the date the universal waste being accumulated became a waste or was received;
- Maintaining an inventory system on-site that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received;

- Placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received; or
- Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

Requirements for All Handlers of Universal Waste:

Requirements are found in Rule 13 of the RI Rules and Regulations for Hazardous Waste Management, and in 40 CFR 273. (Note that the RI Regulations frequently refer to the Code of Federal Regulations for Protection of Environment (40 CFR) which can be obtained free of charge through the Internet at http://www.access.gpo.gov/nara/cfr/index.html.)

Both large and small quantity handlers of universal waste:

- must not dispose of a universal waste in the regular solid waste stream,
- must not dilute or treat universal waste,
- must not intentionally break or crush universal waste,
- must take steps to prevent releases to the environment,
- must label each universal waste item or each container of universal waste items with the words "Universal Waste" and the identity of the waste, e.g. "Waste Thermostats." (Note that with pesticides, affix the old product label to the container, or if not available, affix the appropriate US DOT Label found in 49 CFR 172.)
- must identify the accumulation start date on the container or the item itself,
- must train employees on proper waste handling and emergency procedures,
- must respond to spills/breakage and manage the released material as hazardous waste if it has hazardous waste characteristics,
- must manage unintentional breakage of significant numbers of universal waste items as hazardous waste,
- must satisfy US DOT packaging, labeling, marking, placarding, and shipping paper requirements per 40 CFR 273.18 or 40 CFR 273.38 for any universal waste that is a US DOT hazardous material prior to off-site shipment,
- may accumulate universal wastes on-site for up to one year,
- may accumulate universal waste for *more* than one year for the sole purpose of facilitating proper recovery, treatment, or disposal,
- may self-transport universal wastes to other universal waste handlers or to an authorized destination facility provided that handler complies with universal waste transporter requirements.

Specific Actions Allowed for Both Small and Large Quantity Handlers:

The handler may conduct the following activities with regard to the following waste items:

Batteries: A handler of universal waste must manage universal waste batteries in a way that prevents release of any universal waste or component of a universal waste to the environment. A handler must contain any waste battery that shows evidence of leakage, spillage or damage. However, a handler of universal waste may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but must be immediately closed after removal):

- Sorting batteries by type;
- Mixing battery types in one container;
- Discharging batteries so as to remove the electric charge;
- Regenerating used batteries;
- Disassembling batteries or battery packs into individual batteries or cells;
- Removing batteries from consumer products; or
- Removing electrolyte from batteries.

Note that if the electrolyte is removed, the handler must determine whether or not it exhibits a characteristic of hazardous waste and must manage it as such if it does.

Pesticides: A handler of universal waste must manage universal waste pesticides in a way that prevents release of any universal waste or component of a universal waste to the environment. The universal waste pesticides must be contained in one or more of the following:

- A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; or
- A leaking or damaged container in an overpack container; or
- A tank which meets the requirements for a hazardous waste tank (40 CFR 265 Subpart J); or
- A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

Thermostats: A handler of universal waste must manage universal waste thermostats in a way that prevents releases of universal waste or component of universal waste to the environment. A handler of universal waste *must* contain any universal waste thermostat that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the thermostat, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. A handler of universal waste may remove mercury-containing ampoules from universal waste thermostats provided the handler:

- Removes the ampoules in a manner designed to prevent breakage of the ampoules;
- Removes ampoules only over or in a containment device (e.g., tray or pan sufficient to collect and contain any mercury released from an ampoule in case of breakage);
- Ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampoules from the containment device to a container that meets the requirements of 40 CFR 262.34;
- Immediately transfers any mercury resulting from spills or leaks from broken ampoules from the containment device to a container that meets the requirements of 40 CFR 262.34;
- Ensures that the area in which ampoules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;
- Ensures that employees removing ampoules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;
- Stores removed ampoules in closed, non-leaking containers that are in good condition;
- Packs removed ampoules in the container with packing materials adequate to prevent breakage during storage, handling, and transportation.

Note that if the ampoule is removed, the handler must determine whether or not any spilled mercury, clean-up residues, or remaining solid waste exhibit a characteristic of hazardous waste and must manage it as such if it does.

Cathode Ray Tubes:

A handler of universal waste must manage universal waste cathode ray tubes in a way that prevents releases of universal waste or component of universal waste to the environment. A handler must contain any universal waste cathode ray tube that shows evidence of breakage, leakage, spillage, or damage that could cause the release of glass particles under reasonable foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the cathode ray tubes, and must lack evidence of breakage, leakage, spillage, or damage that could cause the release of glass particles under reasonably foreseeable conditions. A handler of universal waste must also contain unbroken cathode ray tubes in packaging that will minimize breakage during normal handling conditions and must contain cathode ray tubes in packaging that will minimize releases of tube fragments and residues. A handler of universal waste may conduct the following activities:

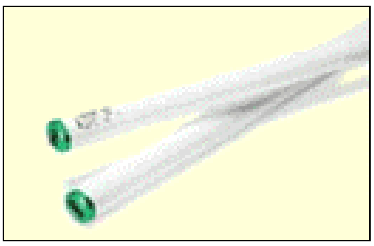
- Sort display devices/cathode ray tubes by type.
- Manage different types of display devices/cathode ray tubes in the same container.
- Test display devices/cathode ray tubes to determine if they are capable of being returned to service.
- Remove cathode ray tubes from display device casings.

Mercury-Containing Devices:

A handler of universal waste must manage universal waste mercury-containing devices in a way that prevents releases of any universal waste or component of universal waste to the environment. A handler of universal waste must contain any universal waste mercury-containing device that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the mercury-containing devices, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. A handler of universal waste may:

- Mix different types of universal waste mercury-containing devices, or universal waste mercury-containing devices and universal waste thermostats in one container; or
- Remove mercury-containing ampoules from universal waste mercury-containing devices provided that the handler complies with the requirements listed in the “thermostats” section.

Mercury-Containing Lamps: A handler of universal waste must manage universal waste mercury-containing lamps in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:



- A handler of universal waste must contain any universal waste mercury-containing lamp that shows evidence of leakage, spillage, or damage that could cause leakage under reasonable foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the mercury-containing lamps, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
- A handler of universal waste must contain unbroken mercury-containing lamps in packaging that will minimize breakage during normal handling conditions.
- A handler of universal waste must contain mercury-containing lamps in packaging that will minimize releases of lamp fragments and residues.

Transporter Requirements: Handlers are allowed to self transport universal waste, but there are specific requirements for transporters. These are detailed in 40 CFR 273 Subpart D and in Rule 13 of the Rhode Island Hazardous Waste Regulations.

The Office of Technical and Customer Assistance advises that prior to implementation of any suggestion or recommendation, the company should consult with proper Federal, State, and Local regulatory agencies. This workbook does not replace the RI Rules and Regulations for Hazardous Waste. The RI Regulations are the basis for compliance and enforcement.

Questions and/or Comments can be directed to:

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